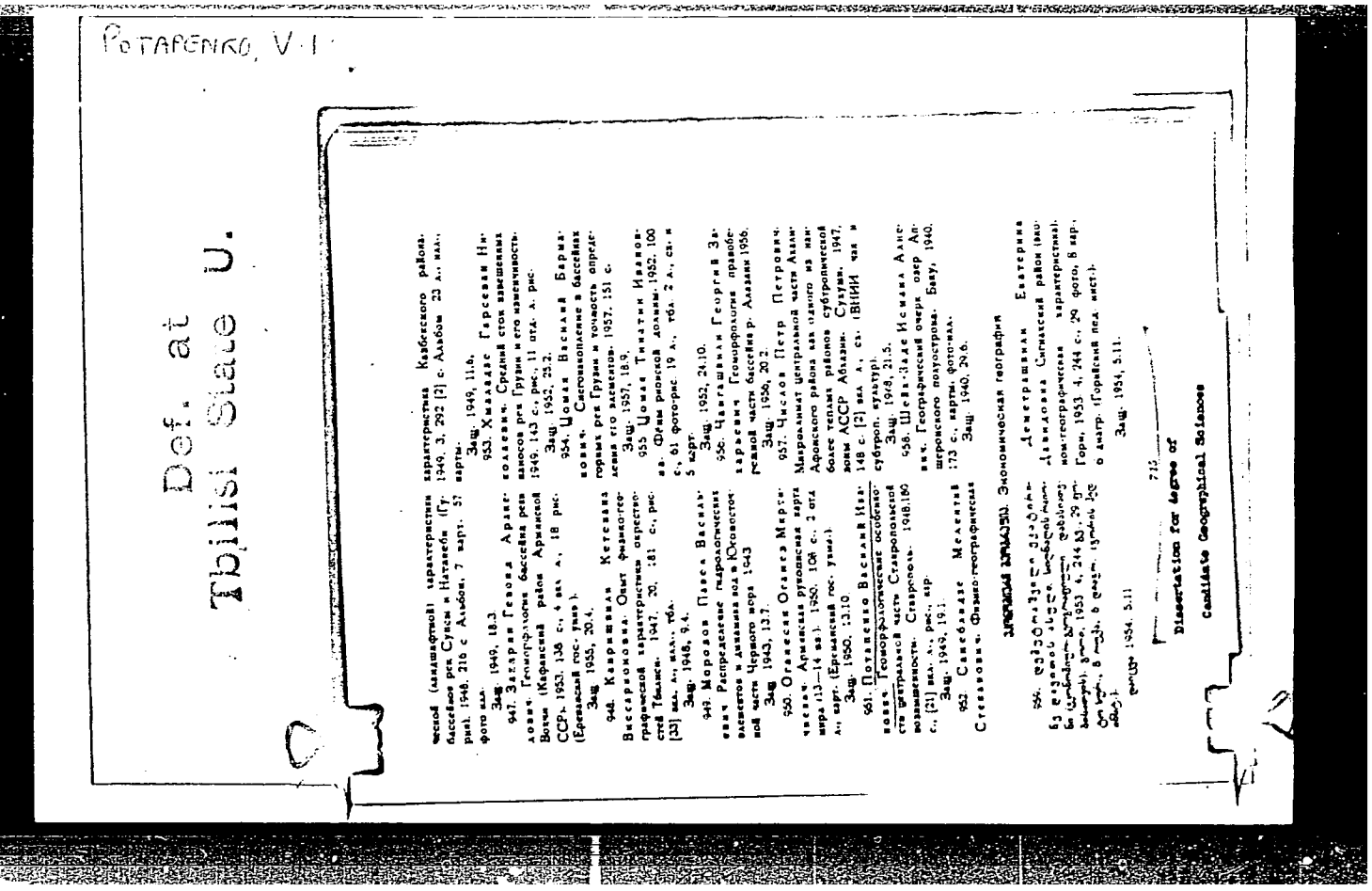


POTAPENKO, V.I., inzhener.

Conference of machine builder - welders of the Stalino Province. Svar. proizv. no.4:28 Ap '57. (MLRA 10:5)
(Machinery--Welding)

POTAPENKO, V. I.

Potapenko, V. I. "The rare phenomenon of the bright iridescence of Clouds," Trudy Georgr. o-va Gruz. SSR, Vol I-II, 1949, p. 65

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

POTAPENKO, V. I.

POTAPENKO, V. I. "The geomorphological properties of the central portion of the Stavropol' up ands", Sbornik trudov In-ta (Stavrop. gor. ped. in-t), Issue 2, 1946, p. 7[illegible]-88.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 7. 1949).

L 7965-66

ACC NR: AP5025751 SOURCE CODE: UR/0286/65/000/018/0099/0099

AUTHORS: Strokov, S. A.; Isayenko, A. A.; Lugovoy, V. P.; Lyubitskiy, A. N.; Perunov, D. G.; Potapenko, V. L.

ORG: none

TITLE: Attachment to hay stacker-loader for loading of mineral fertilizers and other chemicals on planes and other transports. Class 45, No. 174870 [announced by Government Special Construction Office on Grain Removal Machinery (Gosudarstvennoye spetsial'noye konstruktorskoye byuro po kompleksu zernouborochnykh mashin)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 99

TOPIC TAGS: agricultural machinery, chemical loading, tractor attachment, agriculture

ABSTRACT: This Author Certificate presents an attachment to a hay stacker-loader for loading of airplanes and other transports with mineral fertilizers and granular chemicals. The attachment includes a working member in the shape of a scoop with connecting elements to the lifting boom of the loader (see Fig. 1). For loading of mineral fertilizers and grain chemicals, the tractor boom is equipped with a hinged extension frame for attanhment of the scoop which is equipped with a door on the discharge side of the scoop. The door can be activated by the operator. A second version has the scoop pivot located at the top portion of the scoop to provide greater opening of the discharge opening. A third feature provides stops on the

Card 1/2

UDC: 631.364.7:631.82

L 7965-66
ACC NR: AP5025751

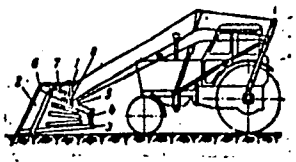


Fig. 1. 1- extension frame; 2- scoop; 3- unloading opening; 4- door; 5 and 7- hydraulic cylinders; 6- front brackets; 8- supports

extension frame to limit scoop rotation. Orig. art. has: 1 figure.

SUB CODE: IE/ SUBM DATE: 29May64

BC

Card 2/2

POTAPENKO, V. S., inzh.

Automatic line for machining relay bars. Mashinostroenie no.5: 27-28 S-O '62. (MIRA 16:1)

1. Kiyevskiy zavod rele i avtomatiki.

(Kiev--Electric equipment industry--Equipment and supplies)

POTAPENKO, V.V.; RUSAKOV, V.P.

System of mining thick coal seams with rod bolting. Kolyma 21 no.2:21-25 F '59. (MIRA 12:7)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut zolota i redkikh metallov.
(Coal mines and mining) (Mine roof bolting)

POTAPENKO, Vladimir Vasil'yevich; LUBIY, Konstantin Ivanovich; GUSSAKOVSKAYA, O.N., red.

[Improving the underground mining of sands] Sovershenstvovanie podzemnoi dobychi peskov. Magadan, Magadanskoe knizhnoe izd-vo, 1964. 99 p. (MIRA 17:10)

POTAPENKO, V.V.
Min Higher Education USSR. Moscow Inst of Nonferrous Metals and Gold imeni M.I. Kalinin. Moscow 1956

POTAPENKO, V.V. -"The use of continuous pouring to control the over-burden in underground working of permafrost placer." Min Higher Education USSR. Moscow Inst. of Nonferrous Metals and Gold imeni M.I. Kalinin. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No. 20, 1956

L 23216-66 EWT(d)/EWP(k)/EWP(l)

ACC NR: AP6013582 SOURCE CODE: UR/0144/65/000/010/1181/1182

AUTHOR: Avilov-Karnaukhov, B. N.; Bogush, A. G.; Gikis, A. F.; Drozdov, A. D.; Malov, D. I.; Sinel'nikov, Ye. M.; Brusentsov, L. V.; Denisov, A. A.; Pal'shau, M. V.; Polyakov, B. A.; Chernyavskiy, F. I.; Burok, V. S.; Gordeyev, V. I.; Kazhdan, A. E.; Kovalev, V. Ye.; Kurennyy, E. G.; Potapenko, V. Ya.

ORG: none

TITLE: Professor G. M. Kayalov on the occasion of his 60th birthday and 37 years of pedagogical activities

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 10, 1965, 1181-1182

TOPIC TAGS: electric engineering personnel, academic personnel

ABSTRACT: Doctor of Engineering Sciences, Professor of RIIZhT /Rostovskiy institut inzhenerov zheleznodorozhnogo transporta; Rostov Institute of Railroad Engineers/, Georgiy Mikhaylovich KAYALOV was born on 26 September 60 years ago. He began his working career as a standby electrical construction worker at the Novorossiysk cement factory. In 1929 he graduated from the Novocherkassk Polytechnical Institute, and between 1928 and 1947 worked in the designing section of the "Elektroprom" trust. Sub-

Card 1/2

L 23216-66
ACC NR: AP6013582

sequently, he joined the Rostov department of the GPI /Gosudarstvennyy proyektnyy institut; State Designing Institute/ "Tyazhpromelektroproyekt" where he advanced from a technician of the designing department to its chief engineer. From 1933 to 1962 he was docent of the department of electrification of industrial enterprises of the NPI /Novocherkasskiy politekhnicheskiy institut imeni Sergo Ordzhonikidze; Novocherkassk Politechnic Institute im. Sergo Ordzhonikidze/; he taught as professor until 1965 and presently is a professor of the RIIZhT. He published more than 70 scientific works, including studies of flywheel-containing electric motors, investigations of electrical loads of industrial enterprises, analyses of basic features of real load graphs, (including their probabilistic modeling), proposals for peak load calculation methods (based on the theory of mass servicing) and developments of methods for the calculation of extremal loads of heavy consumers, for the study of random graphs of reactive loads, for the evaluation of electric load fluctuations, and the like. G. M. KAYALOV was also active in the Party, professional, and scientific organizations. He is a holder of the "For Outstanding Work During the Great Patriotic War of 1941-1945 gg." medal and the "Badge of Honor" decoration. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09, 05 / SUBM DATE: none

Card 2/2 RB

GEBLER, I.V.; SMOL'YANINOV, S.I.; POTAPENKO, V.Ye.; KOSOLAPOV, V.I.

Effect of the additions of iron ore and fluxes on the properties of peat as a metallurgical fuel. Izv.TPI 111:86-90 '61.
(MIRA 16:9)

(Peat) (Iron ore) (Fuel)

POTAPENKO, YA.[I.]

"Acceleration of Development and Fruiting of Fruit-Tree Seedlings," ibid., 23, No. 8, 1939. Michurin Central Genetic Lab. Michurinsk, c1939-.

POTAPENKO,YA. I.

"Quality of Grape Yield As Affected By Accelerated Development", ibid., 24, No. 8, 1939. Michurin Central Genetic Lab.; Michurinsk. c1939-.

POTAPENKO, YA. [I.]

23458 I. Kul'tura vinograda v sredney i tsentral'noy zonakh SSSR. Vinodeliye i vinogradarstvo SSSR, 1949, No. 7, c. 12-17

SO: LETOPIS' NO. 31, 1949

1. POTAPENKO, YA. I.

2. USSR (600)

4. Agriculture

7. Discovery of new improved species of grapes. Rostov-na-Donu, 1952

9. Monthly List of Russian Accessions, Library of Congress. February, 1953. Unclassified.

POTAPENKO, YA. I., LUKYANOV, A. D., LAZARENSKIY, M. A., Authors

Potapenko, Ya. I.

"Viticulture," Reviewed by M. A. Grachev, Sad i og., No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

Card : 1/1

M-8

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 17, 1958, No. 87265

AUTHOR : Potapenko, Ya. I.
INST. :
TITLE : Scientific Work on Viniculture.

ORIG. PUB. : Sad i ogorod, 1957, No 11, 40-44

ABSTRACT : Report of advances in development of viniculture in the USSR in comparison with the pre-revolutionary period. Brief review of the work of the Scientific Research Institute of Viniculture and Wine Production of RSFSR, considered by individual zones.

CARD: 1/1

L 6518-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP5024862 MJW/JD/HW SOURCE CODE: UR/0136/65/000/010/0075/0079

AUTHOR: Kaganovich, I. N.; Potapenko, Yu. I.; Igumenshchev, Ye. D.

ORG: none

TITLE: Thermomechanical treatment of the VT14 alloy forging

SOURCE: Tsvetnyye metally, no. 10, 1965, 75-79

TOPIC TAGS: titanium, titanium alloy, aluminum containing alloy, molybdenum containing alloy, vanadium containing alloy, alloy forging, thermomechanical treatment, alloy thermomechanical treatment, alloy property/VT14 alloy

ABSTRACT: The possibility of lot producing VT14 titanium alloy die forgings with reproducible mechanical properties by applying thermomechanical treatment (TMT) has been investigated. Simple and intricately shaped specimens with a maximum thickness of 40 mm (VT14 alloy hardens to a depth of 15 mm) were die forged with reductions of 22—64% and brine quenched. It was found that TMT improves mechanical properties, especially ductility, and the reproducibility of the characteristics of elongation, reduction of area, and notch toughness. This improvement appears to be the result of the dispersion of structural components and of a great number of sliding planes formed in the process of deformation and uniformly distributed in the metal. It was found advisable to keep to a minimum the number of hammer blows so as to maintain a sufficiently high temperature of parts at the end of forging. From this viewpoint,

Card 1/2

UDC: 669.295:621.78

0901 1703

nw

Card 2/2

SHEVAKIN, Yu. F., doktor tekhn. nauk; RUSINOVICH, Yu. I., inzh.; POTAPENKO, Yu. I., inzh.

Extrusion of a pipe billet of titanium and its alloys. Sbor. Inst. stali i splav. no.40:443-450 '62. (MIRA 16:1)

(Extrusion(Metals)) (Pipe, Titanium)

Potapenko, Yu. I.

PHASE I BOOK EXPLOITATION SOV/3926

Metallurgiya; sbornik statey, No. 2 (Metallurgy; Collection of Articles, No. 2), Leningrad, Sudpromgiz, 1959. 302 p. 2,300 copies printed.

Resp. Ed.: G.I. Kapyrin, Candidate of Technical Sciences; Eds.: V.I. Greznev and N.P. Golubeva; Tech. Ed.: V.I. Troshkin.

PURPOSE: This collection of articles is intended for technical personnel at industrial plants and at research and educational institutions. It may also be used by students taking courses in advanced metallurgy.

COVERAGE: The articles present the following material: original data on the production of steel in open-hearth, electric, and vacuum arc furnaces; information on the rolling of steel sheet of variable thickness along the width; results of an investigation of sheet metal made from large ingots; and problems of measuring the temperature of liquid steel. Some theoretical analysis of production processes is included, and practical recommendations are given concerning specific problems. No personalities are mentioned. Most of the articles are accompanied by references.

AVAILABLE: Library of Congress

Card 5/5

VK/rem/mas
7-25-60

DOBATKIN, V.I.; BOCHVAR, G.A.; POTAPENKO, Yu.I.

Comparative investigation of the properties of ingots and shaped titanium alloy products. Izv. vys. ucheb. zav.; tsvet. met 4 no.3:120-124 '61. (MIRA 15:1)

1. Krasnoyarskiy institut tsvetnykh metallov, kafedra metallovedeniya.

(Titanium alloys--Metallography)

POTAPENKO, Ya.I.; LUK'YANOV, A.D.; LAZAREVSKIY, M.A.; DYUZHEV, P.K.; ZAKHAROVA, Ye.I.; KOVALEV, A.A.; RUZAYEV, K.S.; MECHAYEV, L.N.; BASAN'KO, A.A.; MASHINSKAYA, L.P.; ALIYEV, A.M.; MANOKHIN, P.A.; LITVINOV, P.I.; KOROTKOVA, P.I.; ZAYTSEVA, Yu.F.; GRAMOTENKO, P.M.; TAIROVA, V.N., red.; PROKOF'YEVA, L.N., tekhn.red.

[Viticulture] Vinogradarstvo. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 612 p. (MIRA 14:1)

(Viticulture)

USSR/Cultivated Plants - Fruits. Berries. M.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44343

Author : Potapenko, Ya.I.

Inst : Scientific Research Institute for Viticulture and Wine-Making in the Viticulture Regions of Armenia.

Title :

Orig Pub : Byul nauchno-tekhn. inform. N.-i. in-ta vinogradarstva i vinodeliya, 1957, No 3, 53-59.

Abstract : No abstract.

Card 1/1

SHUL'KIN, S.M., kand.tekhn.nauk; KUSHAKEVICH, S.A., inzh.; POTAPENKO, Yu. I., inzh.

Characteristics in the technology of the manufacture of hot-rolled sheets of 48-OT3 titanium alloys. Metallurgiia 2:282-293 '59. (MIRA 14:3)
(Rolling (Metalwork))(Titanium alloys)

21120
S/149/61/000/003/003/004
A006/A106

1555, 1454, 4016

18 7500

AUTHORS: Dobatkin, V. I., Bochvar, G. A., Potapenko, Yu. I.

TITLE: Comparative investigation of properties of titanium alloy ingots and deformed work

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 3, 1961, 120 - 124

TEXT: The main causes for the difference of properties in ingots and deformed work are defects of the cast structure. For titanium alloys, however, this difference may also be connected with peculiarities of phase recrystallization. The temperature of recrystallization annealing of titanium is considerably below the temperature of allotropic transformation. During the cooling of an ingot the alloy is inevitably in the β-range and, when passing into the $(\alpha+\beta)$ and the α-range, suffers phase recrystallization at a comparatively slow transformation rate. A deformed alloy, however, does not pass through the β-range during annealing. If pressure working is performed at the β-range temperature, phase recrystallization takes place in both the ingot and the deformed work, but at different transformation rates. The authors attempted to determine which of the aforementioned causes was

Card 1/5

S/149/61/000/003/003/004
A006/A106

Comparative investigation of properties of ...

decisive, by heating both cast and forged specimens to a β-range temperature and by subsequent slow or speeded-up cooling. Single and bi-phase alloys were prepared from Tr0 (Tg0) and Tr00(Tg00) sponge. (Composition see table). The content of impurities did not exceed 0.15% Fe, 0.11%Si, 0.07% C, 0.06% N. All the ingots were obtained by double vacuum melting in a water-cooled copper crystallizer. Rods of 12 - 15 mm diameter were forged with a deformation degree not less than 90%; forging was terminated at 800 - 850°C. The blanks were annealed at 750°C. Cast blanks were cut out of the rods on an anodic-mechanical saw. Specimens of 12 mm in diameter or 12 x 60 mm section were heat-treated as follows: heating to 1,100°C for 30 min; cooling with the furnace at 30 degrees per h to 600°C, or in water at 20°C with subsequent annealing at 750°C for one h. The specimens were then subjected to tensile and impact tests. The following regularities were stated in the change of properties: Ultimate strength of forged single-phase alloy specimens was by about 10 kg/mm^2 higher than that of ingots; the difference was 15 kg/mm^2 for bi-phase alloys. Ultimate strength of cast and forged specimens after heating to 1,100°C and slow cooling approached that of the ingot, and that of forged specimens after heating to 1,100°C and high-speed cooling. Elongation and contraction of the cross sections of single-phase alloys varied little, depending on the cooling conditions from the β-range; in forged specimens they exceed in all states the corresponding

Comparative investigation of properties of ...

values of cast specimens. Elongation, contraction and toughness of forged bi-phase alloy specimens are higher than those of ingots. After heating to 1,100°C and both slow or rapid cooling, the indicated characteristics approach those of an ingot. It can be concluded that the main cause for a reduced ductility of bi-phase alloy ingots is the fact of cooling them from the β-range i.e., beta embrittlement. The main cause for a reduced strength of single- and bi-phase alloy ingots is the low cooling rate during the transition through the bi-phase ($\alpha + \beta$) range. The effect of crystallization was less noticeable than that of phase recrystallization, because the defects in the ingots are not strongly developed due to the small range of the liquid-solid state in titanium ingots and low-alloyed titanium alloys. The main difference in the structure of cast and forged specimens treated at 1,100°C is the grain size, which is coarser in cast specimens. The internal structure of the grains in specimens cooled from 1,100°C does not depend on the preliminary treatment but on the cooling rate. The results obtained by the study show the possibility of obtaining the same strength in commercial titanium-alloy castings and in deformed work by proper heat treatment. On the other hand, the results obtained show reduced ductility values of ingots, in particular for bi-phase ($\alpha + \beta$) -alloys. Higher ductility and an optimum strength-ductility ratio in annealed state can not be obtained by deformation in the β-range but only by deformation in the bi-phase or the α -range.

Card 3/5

Comparative investigation of properties of ... S/149/61/000/003/003/004
A006/A106

There are 3 tables and 2 figures

ASSOCIATION: Krasnoyarskiy institut tsvetnykh metallov (Krasnoyarsk Institute of Non-Ferrous Metals) Kafedra metallovedeniya (Department of Metal Science)

SUBMITTED: August 15, 1960

Table
Chemical composition and transformation temperature of the titanium alloys investigated

Alloy	Ingot diam. mm	Content. %					Transformation temperature $\beta \rightarrow \alpha + \beta$ °C
		Al	V	Mo	Sn	Fe	
BT1 (VT1)	120	-	-	-	-	-	-
BT 5 (VT5)	200	4.87	-	-	-	-	1000
BT5-1(VT5-1)	380	4.69	-	-	2.6	-	1000

Card4/5

21120

Comparative investigation of properties of ... S/149/61/000/003/002/004
A006/A106

BT 6 (VT6)	380	5.13	4.07	-	-	-	970
BT 6 (VT6)	120	5.45	3.55	-	-	-	-
TiAlMo	120	5.35	-	2.69	-	-	-
TiAlMoFe	200	3.78	-	2.75	-	1.5	940

Card 5/5

POTAPENKO, Yu.Ya.; MOMOT, S.P.

New data on Cambrian sediments in the Northern Caucasus. Dokl. AN SSSR 164 no.3:648-650 S '65. (MIRA 18:9)

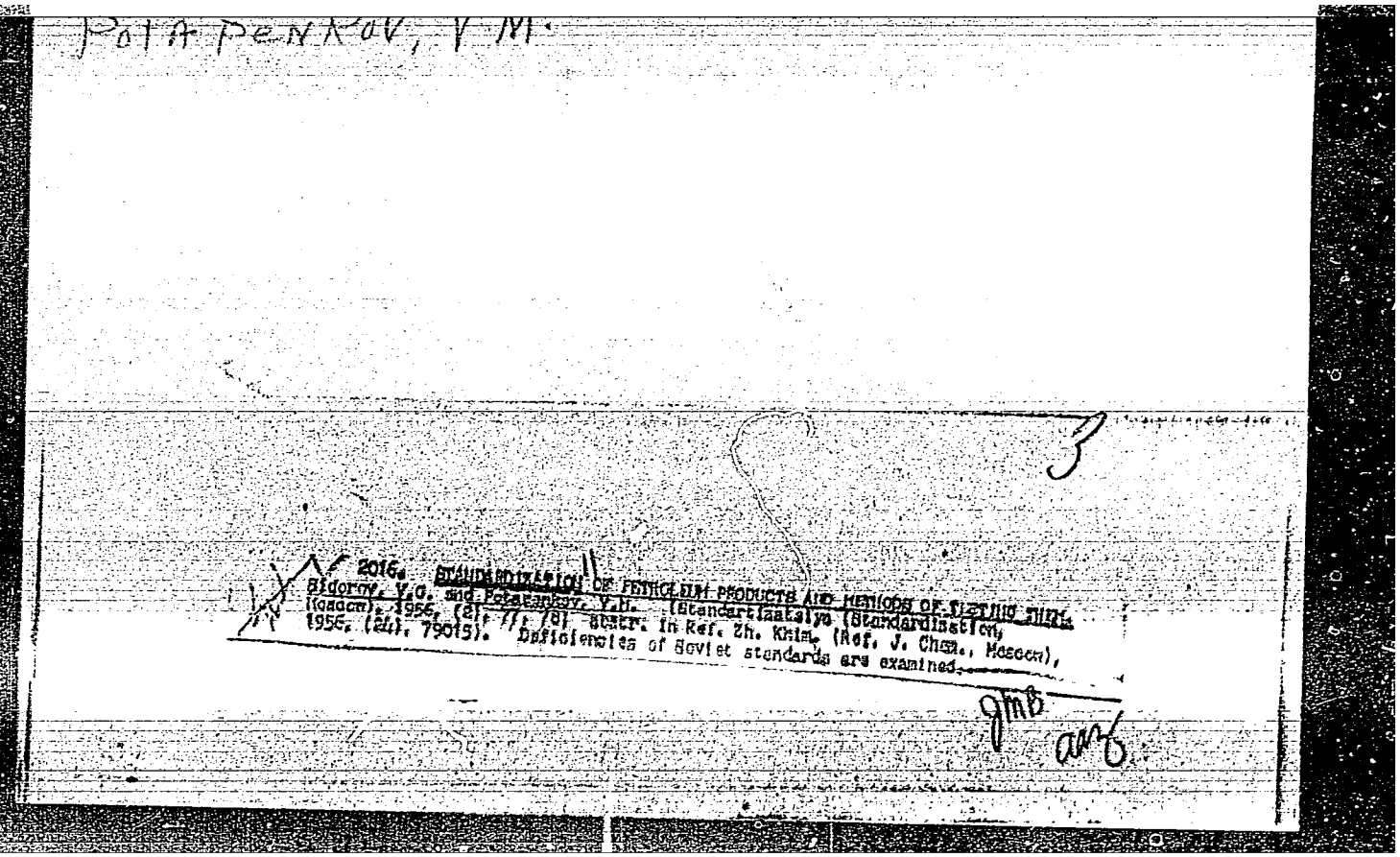
1. Submitted March 9, 1965.

POTAPENKO, Z.I., inzh., starshiy prepodavatel'

Economic effect of the standardization of train weight norms in connection with the introduction of the new types of traction. Trudy BIIZhT no.9:105-120 '61. (MIRA 16:9)
(Railroad--Management)

SIDOROV, V.G., inzhener; POTAPENKOV, V.M., inzhener.

Standardizing petroleum products and methods for testing them.
Standartizatsiia no.2:77-78 Mr-Ap '56. (MLRA 9:5)
(Petroleum--By-products--Standards)



Pol'A PENKOV, V.M.

3

2016. STANDARDIZATION OF PETROLEUM PRODUCTS AND METHODS OF TESTING THEM.
Bidorov, V.G. and Polyanskiy, V.M. (Standartizatsiya (Standardization),
(Moscow), 1956, (2), 77-78) Abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow),
1956, (24), 79015). Deficiencies of Soviet standards are examined.

gmb
aw6

AKIMOV, V.I., kand.tekhn.nauk (Gomel'); ZAYTSEV, P.F., kand.tekhn.nauk (Gomel'); POTAPENKOV, Z.I., kand.ekonom.nauk (Gomel'); SHUL'PENKO, V.M., inzh. (Gomel'); SALKO, L.I., inzh. (Gomel')

Preparing a railroad line for high-speed traffic. Zhel.dor.transp. 47 no.10:55-57 O '65. (MIRA 18:10)

AUTHORS: 1)Gorodskiy, D. A., Professor, Doctor of Technical Sciences, Volchkov, I. Ye., Engineer 2)Ivanov-Smolenskiy, A. V., Docent, Candidate of Technical Sciences 3)Teretennikov, L. P., Docent, Candidate of Technical Sciences, Barinov, N. G., Docent, Candidate of Technical Sciences, Babushkin, M. N., Candidate of Technical Sciences Potapkin, A. I., Engineer (Leningrad) SOV/105-58-9-19/34

TITLE: Dynamic Models of Power Systems (O dinamicheskikh modelyakh energosistem)

PERIODICAL: Elektrichestvo, 1958, Nr 9, pp 80 - 82 (USSR)

ABSTRACT: Remarks concerning the paper by I.S.Bruk in Elektrichestvo, 1950, Nr 2. 1) According to the paper, the methods of using mathematical and physical models are contrary to each other. It is shown here that this is not correct and that a reasonable coordination of the two methods should rather be aimed at. 2) The author follows the opinion of M.P.Kostenko, V.A.Venikov and N.N.Shchedrin, and points out that for investigating transients in electric power systems one should combine the results gained with dynamic models with those obtained by the use of electronic digital computers. 3) The authors ask for a combined use of dynamic models and computers. They show that even in such fields where digital computers prevail, one cannot do without dynamic models. There are 3 Soviet references.

Card 1/2

ASSOCIATION: 1)Nauchno-issledovatel'skiy institut elektrotekhnicheskoy promyshlennosti (Scientific Research Institute of Electrical Industry)2) Moskovskiy energeticheskiy institut (Moscow Institute for Power Engineering)

Card 2/2

[illegible], V. (g.Minsk)

[illegible]-pull output stage with low-voltage power supply. Radio no.9:42 S '61. (MIRA 14:10)
(Radio circuits)

ULITSKIY, B.Ye., doktor tekhn.nauk; KRAMER, Ye.L., inzh.; POTAPKIN, A.A., inzh.; SAKHAROVA, I.D., inzh.

Three-dimensional calculation of coreless spans. Avt.dor. 25 no.4:18-20 Ap '62. (MIRA 15:5)
(Bridges--Design)

GORODSKIY, D.A., prof., doktor tekhn.nauk; VOLCHKOV, I.Ye., inzh.; IVANOV-SMOLENSKIY, A.V., dots., kand.tekhn.nauk; VERKHOVNIKOV, L.P., dots., kand.tekhn.nauk (Leningrad); BARINOV, N.G., dots., kand.tekhn.nauk (Leningrad); BABUSHKIN, M.N., kand.tekhn.nauk (Leningrad); POTAPKIN, A.I., inzh. (Leningrad).

Dynamic models of power systems. Elektrichestvo no.9:80-82 S '58. (MIRA 11:10)

1. Nauchno-issledovatel'skiy institut elektrotekhnicheskoy promyshlennosti (for Gorodskiy, Volchkov). 2. Moskovskiy energeticheskiy institut (for Ivanov-Smolenskiy).
(Electric networks)

POTAPKIN, A.I.

POTAPKIN A.I.

SOV/105-58-9-19/34

AUTHORS: 1)Gorodskiy, D. A., Professor, Doctor of Technical Sciences, Volchkov, I. Ye., Engineer 2)Ivanov-Smolenskiy, A. V., Docent, Candidate of Technical Sciences 3)Veretennikov, L. P., Docent, Candidate of Technical Sciences, Barinov, N. G., Docent, Candidate of Technical Sciences, Babushkin, M. N., Candidate of Technical Sciences Potapkin, A. I., Engineer (Leningrad)

TITLE: Dynamic Models of Power Systems (O dinamicheskikh modelyakh energosistem)

PERIODICAL: Elektrichestvo, 1958, Nr 9, pp 80 - 82 (USSR)

ABSTRACT: Remarks concerning the paper by I.S.Bruk in Elektrichestvo, 1958, Nr 2. 1) According to the paper, the methods of using mathematical and physical models are contrary to each other. It is shown here that this is not correct and that a reasonable coordination of the two methods should rather be aimed at. 2) The author follows the opinion of M.P.Kostenko, V.A.Venikov and N.N.Shchedrin, and points out that for investigating transients in

Card 1/2

electric power systems one should combine the results gained with dynamic models with those obtained by the use of electronic digital computers. 3) The authors ask for a combined use of dynamic models and computers. They show that even in such fields where digital computers prevail, one cannot do without dynamic models. There are 3 Soviet references.

ASSOCIATION: 1)Nauchno-issledovatel'skiy institut elektrotekhnicheskoy promyshlennosti (Scientific Research Institute of Electrical Industry)2) Moskovskiy energeticheskiy institut (Moscow Institute for Power Engineering)

Card 2/2

L 61908-65

AM5010322 BOOK EXPLOITATION UR/ 629.12.066:681.14 70 B1

Veretennikov, Leonid Porfir'yevich; Potapkin, Aleksandr Ivanovich; Paimov, Mikhail Mikhaylovich

Modeling, computer engineering, and transfer processes in electric power systems on ships (Modelirovaniye, vychislitel'naya tekhnika i perekhodnyye protsessy v sudovykh elektroenergeticheskikh sistemakh), Leningrad, Izd-vo "Sudostroyeniye", 1964. 383 p. illus., biblio. 2,300 copies printed.

TOPIC TAGS: shipbuilding engineering, model, electric equipment, electric power engineering, computer technology, analog computer, digital computer, electrodynamics, differential equation, similarity theory

PURPOSE AND COVERAGE: The book attempts to systemize experience in the application of modeling and computer engineering facilities for the investigation and calculation of transient processes in alternating current electric power systems on ships. The author presents the necessary information on the principles of construction and use of electrodynamic and static models of shipborne electric power systems and analogue and digital computers. The book contains examples which

Card 1/3

L 6/1908-65

AM5010322

use various means of modeling and computer engineering for the calculation and investigation of transient processes in the ship's electric power system. The calculations are based on Gorev-Park differential equations. The book is intended for electrical engineers of the shipbuilding industry and students specializing in corresponding fields in order to acquaint them with the possibilities and methods of using modeling and computer engineering facilities in the process of designing and investigating electric power systems on ships.

TABLE OF CONTENTS (abridged):

Card 2/3

L 61908-65

AM5010322

Ch. VII. Joint use of modeling and computer engineering facilities -- 349
Supplement -- 369
Bibliography -- 379

SUB CODE: DP, EE SUBMITTED: 08Sep64 NO REF SOV: 070

OTHER: 005

dm

Card 3/3

UMAROV, S.; IVANOV, I.; SOBOLEV, A.; KRASNOV, V.; VASILEVSKIY, I.; POTAPKIN, I.; IL'ICHEV, N.; PIZENGOL'TS, M.; SOKRATOV, K.; CHURSIN, A.; KAUGER, V.; VOLOVODOV, A.; BAZARYA, M.

Issuing credit to collective farms should be equal to the standard of the new tasks. Den. i kred. 16 no.4:3-26 Ap '58. (MIRA 11:5)

1. Upravlyayushchiy Uzbekskoy kontoroy Gosbanka (for Umarov). 2. Zamestitel' upravlyayushchego Rostovskoy oblastnoy kontoroy Gosbanka (for Ivanov). 3. Upravlyayushchiy proizvodstvenno-ekspluatatsionnogo otdela Sakhalinskoy oblastnoy kontory Gosbanka (for Sobolev). 4. Nachal'nik proizvodstvenno-ekspluatatsionnogo otdela Sakhalinskoy oblastnoy kontory Gosbanka (for Krasnov). 5. Zamestitel' upravlyayushchego Belorusskoy respublikanskoy kontoroy Gosbanka (for Vasilevskiy). 6. Nachal'nik otdela kreditovaniya sel'skogo khozyaystva i zagotovok Ukrainskoy respublikanskoy kontory Gosbanka (for Potapkin). 7. Upravlyayushchiy Mordovskoy respublikanskoy kontoroy (for Il'ichev). 8. Starshiy prepodavatel' Voronezhskogo sel'skokho zyaystvennogo instituta (for Pizengol'ts). 9. Saratovskiy ekonomicheskiy institut (for Sokratov). 10. Upravlyayushchiy Sovetskim otdeleniym Gosbanka Krasnodarskogo kraya (for Chursin). 11. Upravlyayushchiy Gorodishchenskim otdeleniyem Gosbanka Penzenskoy oblasti (Kauger). 12. Upravlyayushchiy Zherdevskim otdeleniyem Gosbanka Tambovskoy oblasti (for Volovodov). 13. Nachal'nik Upravleniya sel'skogo khozyaystva i zagotovok Gosbanka (for Bazarya). (Agricultural credit)

POTAPKIN, I.

Issuing credit to collective farms. Den.i kred. 17 no.5:44-46 My '59. (MIRA 12:10)

(Ukraine--Agricultural credit)

POTAPKIN, V.F.

Forward slip in hot rolli[illegible]. Izv. vys. ucheb. zav.; chern. met. 7 no.12:63-77 '64 (MIRA 18:1)

1. Kramatorskiy vechernyy industrial'nyy institut.

POTAPKIN, V.F.

Endless screw distributor of sheets from the pack. Biul. TSIICHM no.5:48 '61. (MIRA 14:10)
(Rolling mills--Equipment and supplies)

POTAPKIN, V.F.

Determining the rolling moment on sheet mills. Izv. vys. ucheb. zav.; chern. met. 8 no.2:81-86 '65.
(MIRA 18:2)

1. Kramatorskiy vecherniy industrial'nyy institut.

KOVALEVSKAYA, V.V.; POTAPKIN, V.K.

Electroacoustic temperature-to-frequency converter. Priborostroenie no.2:11-13 F '63. (MIRA 16:5)
(Converters)

P.3

16(1)

PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: G.N. Shevchanko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The

Card 1/34

book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

TABLE OF CONTENTS:

BRIEF CONTENTS OF REPORTS OF THE SECTIONS

Card 3/34

REPORT OF FOREIGN SCIENTISTS

Section on Number Theory

Section on Algebra

POTAPKIN, V.S.

Use of annihilation for the propulsion of photon rockets.
Vest. Mosk. un. Ser. 3: Fiz., astron. 19 no.4:3-13 Jl-Ag '64.
(MIRA 17:10)

1. Kafedra teoreticheskoy fiziki Moskovskogo universiteta.

L 14358-65 ARG/EEO-2/EWG(k)/EWG(j)/EWT(d)/FBD/FSF(h)/FSS-2/EWG(r)/EWT(1)/
FBO/EWP(m)/EWT(m)/FS(v)-3/EEC(k)-2/EWG(e)-2/FCS/EWP(f)/EWG(v)/EWP(c)/EWA(d)/
EPR/EPA(w)-2/T-2/EWG(a)/EWP(h)/EPA(bb)-2/EWG(c)/FCS(k)/EWA(m)-2/FS(b) Pn-4/
Pz-6/Po-4/Pd-1/Pab-10/Pe-5/Pq-4/Pac-4/Pf-4/Pe-4/Pae-2/Pi-4/Pw-4 IJP(c)/
AFWL/SSD/AEDC(b)/BSD/AFMD(c)/AFETR/AFTC(a)/ESD(t)/
ACCESSION NR: AP4043793 S/0188/64/000/004/0003/0013
ESD(si) JWA/TT/
BW/WW/GW

AUTHOR: Potapkin, V. S.

TITLE: The use of annihilation in the propulsion of photonic rockets

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 4, 1964, 3-13

TOPIC TAGS: deep space rocket, deep space emission, rocket, rocket propulsion, photonic rocket, particle annihilation energy

ABSTRACT: After considering possible propulsion systems for future deep space flights, the author concludes that only the proton-anti-proton annihilation principle offers some promise of feasibility as a propulsion agent. A photonic rocket based on this principle will be able to reach 9/10 of the velocity of light with a reasonable mass ratio of 0.23. A satisfactory model of nucleon-antinucleon annihilation suitable for propulsion purposes has been obtained by

Card 1/3

L 14358-65
ACCESSION NR: AP4043793

Ya. A. Pomeranchuk (DAN SSSR, v. 78, 1951, p. 889). One of the problems occurring in this situation is the decay of π^0 mesons. The neutral products of the reaction are expected to contribute to the thrust through a series of successive scatterings in which momentum is transmitted from one particle to another. However, the photons resulting from the meson decay reaction will be much too energetic for the rocket nozzle material. Consequently, it is expected that the nozzle of the rocket will be made of heavy metal-derived plasma contained in a strong magnetic field. Another basic problem is focusing the generated beam. Charged particles can be focused directly by electric and magnetic fields. The latter can be of the order of 10^5 oe, which is quite achievable by current methods. The antiprotons would be injected from the circumference of the nozzle at a small angle to the rocket axis while the protons would be supplied from the heat of the rocket. This configuration would make it possible later to assume a ram jet mode of operation. The π-mesons would thus be directed along the axis of the rocket while the π^+ mesons would fly towards the walls of the nozzle. The confining

Card 2/3

L 14358-65
ACCESSION NR: AP4043793

2

electric field should thus be positive and should extend to a small distance within the nozzle. The magnetic field will also be axially symmetric and will decrease away from the axis of the rocket. "In conclusion the author thanks Prof. K. P. Stanyukovich and M. I. Kiselev who made valuable remarks in evaluating the paper." Orig. art. has: 22 equations.

ASSOCIATION: Kafedra teoreticheskoy fiziki* (Theoretical Physics Department)

SUBMITTED: 27May63 ENCL: 00

SUB CODE: SV, NP NO REF SOV: 007 OTHER: 010

Card 3/3

SNEGOVSKIY, F.P., kand.tekhn.nauk; POTAPKINA, N.N., inzh.

Performance of capron bearings at high speeds and loads. Mashinostroenie no.2:90-92 Mr-Ap '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy i proyektno-tekhnologicheskiy institut mashinostroyeniya, g. Kramatorsk.
(Plastic bearings--Testing)

POTAPKOV, N. A., Cand Phys-Math Sci -- (diss) "Spin-wave theory of magnetic anisotropy." Mos, /Pub House Acad Sci USSR/, 1958. 5 pp (Acad Sci USSR, Math Inst im V. A. Steklov), 130 copies (KL, 16-58, 116)

POTAPKOV, N. A.

20-6-12/47

AUTHOR: Potapkov, N. A.

TITLE: Concerning the Theory of the Anisotropy of Cubic Crystals. (K teorii anizotropii kubicheskikh kristallov).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 965-966 (USSR)

ABSTRACT: The present paper takes into account the spin wave interaction for anisotropic ferromagnetics with cubic symmetry according to Dyson's method (reference 3). First the Hamiltonian of the system is given. In the case of an arbitrary direction of the outer magnetic field the direction of the magnetization vector does not agree with the direction of the crystallographic axes and the Hamiltonian is expediently related to another coordinate system (z-axis in the direction of the magnetization vector). Transformation formulae for the operators occurring in this Hamiltonian s are given. Then expressions for the ground state and the excited state of the system are written down. The nonorthogonality of these excited states causes an interaction between the spin waves which is here designated as kinematic interaction. Then the energy-operator $\mathcal{H}$ in the ideal spin wave model is written down. The third term of $\mathcal{H}$ describes the scattering of two spin waves. The energy operator also contains terms which describe the scattering of 3 and 4 spin waves, but they are omitted in the calculation of

Card 1/2

Concerning the Theory of the Anisotropy of Cubic Crystals. 20-6-12/47

the free energy. Finally the expression obtained for the free energy is discussed. There are 3 references, 2 of which are Slavic.

ASSOCIATION: Mathematical Institute imeni V. A. Steklov AN USSR (Matematicheskiy institut im. V. A. Steklova Akademii nauk USSR).

PRESENTED: August 22, 1957, by N. N. Bogolyubov, Academician

SUBMITTED: August 19, 1957

AVAILABLE: Library of Congress

Card 2/2

On the Theory of the Anisotropy of Ferromagnetic Mono-Crystals

of Dyson, the author shows the sum of states Z as an ideal spin-wave model, in which a harmonic oscillator is linked to each point of the lattice. The operators are described by means of the operators of formation and of destruction. Also for the complete set of the orthogonal and normalized states of an ideal system a formula is given. The sum of states also is written down for a certain ideal model. The sums are computed by the method of the Feynman-Graphs. For the free energy per one free atom, a term is written down explicitly. The small amount of the dynamic interaction shows that the spin wave theory can be used for that temperature range, which here is examined. There are 5 references, 3 of which are Slavic.

ASSOCIATION: Mathematical Institute imeni V. A. Stoklov AN USSR (Matematicheskiy institut im. V. A. Steklova Akademii nauk SSSR)

PRESENTED: August 8, 1957, by N. N. Bogolyubov, Academician

SUBMITTED: July 29, 1957

AVAILABLE: Library of Congress

POTAPKOV, N.A.; TYABLIKOV, S.V.

Contribution to the theory of s--d model. Fiz. tver. tela 2 no.11: 2733-2742 N '60. (MIRA 13:12)

1. Magnitnaya laboratoriya AN SSSR i Matematicheskiy institut imeni V.A. Steklova AN SSSR.
(Molecules) (Ferromagnetism)

38101
S/020/62/144/002/006/028
B104/B102

24.4400

AUTHOR: Potapkov, N. A.

TITLE: Hamiltonian of a uniaxial ferromagnetic

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 2, 1962, 297 - 299

TEXT: The author considers the Hamiltonian

$$\mathcal{H} = -\mu \sum \langle \alpha | HS_q | \alpha' \rangle a_\alpha^+ a_{\alpha'} + \sum \left\langle \alpha \left| \sum U_f(q) \right| \alpha' \right\rangle a_\alpha^+ a_{\alpha'} +$$
$$+ \frac{1}{2} \sum \langle \alpha_1 \alpha_2 | \Phi(q_1 - q_2) | \alpha_1' \alpha_2' \rangle a_{\alpha_1'}^+ a_{\alpha_2'}^+ a_{\alpha_2} a_{\alpha_1} +$$
$$+ \frac{Ze^2}{2m^2c^2} \sum \left\langle \alpha \left| \sum \frac{1}{|l - q|^2} L_l S_q \right| \alpha' \right\rangle a_\alpha^+ a_{\alpha'} +$$
$$+ \frac{e^2}{2m^2c^2} \sum \left\langle \alpha_1 \alpha_2 \left| \frac{S_1 S_2}{r_{12}^2} - \frac{3(S_1 r_{12})(S_2 r_{12})}{r_{12}^4} \right| \alpha_1' \alpha_2' \right\rangle a_{\alpha_1}^+ a_{\alpha_2}^+ a_{\alpha_2'} a_{\alpha_1'}.$$

Card 1/ 5

Hamiltonian of a uniaxial.....

of an electron system which takes spin-orbital and spin-spin interactions into account. H is the external magnetic field, a and a^+ are the Fermi operators, and α denotes the quantum numbers. The Hamiltonian is reduced to a suitable form in order to find the energy eigenvalues of the system more easily. For the case where the energy operator receives a contribution from d-electrons only, the quantum states of the electrons are characterized by the number f of lattice points and by the magnetic and spin quantum numbers designated respectively by m and σ. After the Hamiltonian has been projected onto the ground state (cf. S. V. Tyablikov, Vestn. Mosk. univ. 3, 35, 1949) it is made to approximate an accuracy of terms of second order. By passing from Fermi to spin operators, the following form is obtained for the Hamiltonian:

Card 2/5

S/020/62/144/002/006/026
B104/B102

Hamiltonian of a uniaxial....

$$\mathcal{H} = -\mu \sum HS_l - \frac{1}{2}\sum I(f_1 m_1, f_2 m_2)\, S_{f_1 m_1} S_{f_2 m_2} -$$
$$- \frac{1}{2}\sum \delta I(f_1 m_1, f_2 m_2) S^z_{f_1 m_1} S^z_{f_2 m_2} -$$
$$- \sum B_{fm}\left\{ m - \frac{B_{fm}}{2}\left[\frac{(2-m)(3+m)}{E_{m+1}-E_m} - \frac{(2+m)(3-m)}{E_{m-1}-E_m}\right]\right\} S^z_{fm} -$$
$$- \frac{1}{4}\sum B^2_{fm}\left[\frac{(2-m)(3+m)}{E_{m+1}-E_m} - \frac{(2+m)(3-m)}{E_{m-1}-E_m}\right](S^z_{fm})^2.$$

Here,

Card 3/5

$$\delta I = \delta I_1 + \delta I_2 + \delta I_3;$$

$$\delta I_1 (f_1 m_1, f_2 m_2) =$$
$$= \frac{e^2}{2m^2c^2} \left\langle f_1 m_1 f_2 m_2 \left| \frac{S_1 S_2}{r_{12}^3} - \frac{3 (S_1 r_{12}) (S_2 r_{12})}{r_{12}^5} \right| f_1 m_1 f_2 m_2 \right\rangle;$$

$$\delta I_2 (f_1 m_1, f_2 m_2) = \frac{e^2}{2m^2c^2} \left\langle f_1 m_1 f_2 m_2 \left| \frac{S_1 S_2}{r_{12}^3} - \frac{3 (S_1 r_{12}) (S_2 r_{12})}{r_{12}^5} \right| f_2 m_2 f_1 m_1 \right\rangle;$$

$$\delta I_3 (f_1 m_1 f_2 m_2) =$$
$$= \left(\frac{Ze^2}{2m^2c^2} \right)^2 \frac{1}{\Delta (f_1 m_1 f_2 m_2)} \left\{ \left\langle f_1 m_1 \left| \sum \frac{L^+_{f'q}}{|f' - q|^3} \right| f_2 m_2 \right\rangle \left\langle f_2 m_2 \left| \frac{L^-_{f'q}}{|f' - q|^3} \right| f_1 m_1 \right\rangle \right.$$
$$\left. - \left\langle f_1 m_1 \left| \sum \frac{L^z_{f'q}}{|f' - q|^3} \right| f_2 m_2 \right\rangle \left\langle f_2 m_2 \left| \frac{L^z_{f'q}}{|f' - q|^3} \right| f_1 m_1 \right\rangle \right.;$$

$$B_{fm} = \frac{Ze^2}{2m^2c^2} \left\langle fm \left| \frac{1}{|f - q|^3} \right| fm \right\rangle.$$

Hamiltonian of a uniaxial.....

S/020/62/144/002/006/028
B104/B102

In this Hamiltonian the first term is the Zeeman energy, the second is the electrostatic interaction, the third describes the spin-spin interaction and the spin-orbital exchange interaction; the last two terms describe the spin-orbital interaction averaged over the wave functions of the individual lattice points.

ASSOCIATION: Magnitnaya laboratoriya Akademii nauk SSSR (Magnetic Laboratory of the Academy of Sciences USSR)

PRESENTED: December 27, 1961, by N. N. Bogolyubov, Academician

SUBMITTED: November 20, 1961

Card 5/5

S/0048/64/028/003/0495/0498

ACCESSION NR: AP4023395

AUTHOR: Potapkov, N.A.

TITLE: Contribution to the theory of ferromagnetic resonance /Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.3, 1964, 495-498

TOPIC TAGS: ferromagnetic resonance, ferromagnetic resonance theory, ferromagnetic resonance natural width, spin system interaction

ABSTRACT: The natural width of a ferromagnetic resonance line is calculated for a crystal with uniaxial anisotropy. The calculation was undertaken because it is now becoming possible to produce crystals for which the natural width will not be overwhelmed by broadening due to impurities and lattice defects. The Hamiltonian for the spin system in an external magnetic field is taken from work of S.V.Tyablikov (Zhur. eksp.i teor.fiz.,20,661,1950). This Hamiltonian includes the interactions within the spin system but not those of the spins with the lattice vibrations. The spin system is assumed to be in thermal equilibrium with the lattice, but the interactions responsible for establishing this equilibrium are not explicitly included. To this Ha-

Card 1/2

ACCESSION NR: AP4023395

miltonian is added the demagnetization energy for an ellipsoidal sample and the interaction energy with the oscillating field. The susceptibility of the system is expressed in terms of the retarded Green's functions of S.V.Tyablikov (Fizika tverdogo tela,2,361,1960; Ibid.2,2009,1960). The defining equation for these Green's functions is taken from a paper of N.N.Bogolyubov and S.V.Tyablikov (Dokl.AN SSSR,126,53,1959). When the time derivatives are eliminated from this equation with the aid of Heisenberg's equation of motion, an open system of coupled equations is obtained for an infinite set of Green's functions. A "random phase" type of approximation is now introduced: the Green's functions involving more than two spin operators are assumed to be linear functions of products of those that involve only two. The resulting closed system of equations is solved, and the corresponding susceptibility is calculated. From the susceptibility, formulas are derived for the resonant frequency and the line width. The numerical value of the line width for typical values of the parameters is not discussed. Orig.art.has: 28 formulas.

ASSOCIATION: Matematicheskiy institut im.V.A.Steklova Akademii nauk SSSR (Mathematical Institute, Academy of Sciences, SSSR)

SUBMITTED: 00 DATE ACQ: 10Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 003 OTHER: 001

Card 2/2

POTAPKOV, N.A.

Magnetic anisotropy of uniaxial ferromagnetics. Dokl. AN SSSR 151 no.3:543-545 Jl '63. (MIRA 16:9)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR. Predstavleno akademikom N.N.Bogolyubovym.
(Ferromagnetism) (Quantum theory)